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 NEWS  6  DEC 01   LISA now available on STN
 NEWS  7  DEC 09   12 databases to be removed from STN on December 31, 2004
 NEWS  8  DEC 15   MEDLINE update schedule for December 2004
 NEWS  9  DEC 17   ELCOM reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  10 DEC 17   COMPUAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  11 DEC 17   SOLIDSTATE reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  12 DEC 17   CERAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  13 DEC 17   THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB

 NEWS EXPRESS  OCTOBER 29 CURRENT WINDOWS VERSION IS V7.01A, CURRENT
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=> s (retro-inverted peptide)
L1 26 (RETRO-INVERTED PEPTIDE)

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L1 ANSWER 1 OF 26 USPATFULL on STN
TI Peyer's patch and/or M-cell targeting ligands
AB Purified synthetic polypeptide ligands for targeting pharmaceutical agents and carriers comprising such agents to intestinal epithelial tissue, especially Peyer's patch and/or M-Cell tissue. Also methods of using the ligands.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2003:140513 USPATFULL		
TITLE:	Peyer's patch and/or M-cell targeting ligands		
INVENTOR(S):	O'Mahony, Daniel, Blackrock, IRELAND Lambkin, Imelda, Sutton, IRELAND Higgins, Lisa, Donabate, IRELAND		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003096354	A1	20030522
APPLICATION INFO.:	US 2002-185815	A1	20020628 (10)
	NUMBER		DATE
PRIORITY INFORMATION:	US 2001-302591P		20010702 (60)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	CAESAR, RIVISE, BERNSTEIN, COHEN & POKOTILOW, LTD., ATTN: ELAN, 12TH FLOOR, SEVEN PENN CENTER, 1635 MARKET STREET, PHILADELPHIA, PA, 19103-2212		
NUMBER OF CLAIMS:	95		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	32 Drawing Page(s)		
LINE COUNT:	1819		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 2 OF 26 USPATFULL on STN
TI Retro-, inverso- and retro-inverso synthetic peptide analogues
AB Synthetic peptide antigen analogues of native peptide antigens with partial or complete retro, inverso or retro-inverso modifications are provided. When administered as an immunogen to an immunocompetent host

the synthetic peptide antigen analogues induce the production of antibodies which recognize the native peptide antigen. Uses of these analogues, vaccines and methods of preparing vaccines comprising these antigen analogues, and antibodies generated using these antigen analogues are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2001:111840 USPATFULL			
TITLE:	Retro-, inverso- and retro-inverso synthetic peptide analogues			
INVENTOR(S):	Comis, Alfio, Bossley Park, Australia Tyler, Margaret Isabel, Turramurra, Australia Fischer, Peter, Oslo, Norway			
PATENT ASSIGNEE(S):	Deakin Research Limited, New South Wales, Australia (non-U.S. corporation)			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6261569	B1	20010717	
	WO 9405311		19940317	
APPLICATION INFO.:	US 1997-909551		19970812	(8)
	WO 1993-AU441		19930827	
			19950424	PCT 371 date
			19950424	PCT 102(e) date
RELATED APPLN. INFO.:	Continuation of Ser. No. US 387932, now abandoned			
	NUMBER		DATE	
PRIORITY INFORMATION:	AU 1992-4374		19920827	
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	GRANTED			
PRIMARY EXAMINER:	Allen, Marianne P.			
ASSISTANT EXAMINER:	Zeman, Mary K.			
LEGAL REPRESENTATIVE:	Howson and Howson			
NUMBER OF CLAIMS:	16			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	12 Drawing Figure(s); 10 Drawing Page(s)			
LINE COUNT:	1585			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 3 OF 26 USPATFULL on STN

TI Retro-inverso analogues of thymopentin and the method for their synthesis

AB New analogues of thymopentin (TP5) and of its tetrapeptide fragment (TP5.sup.1-4) containing two non-contiguous retro-inverted bonds in the peptide chain are described which are of the general formula (I) ##STR1## where R is hydrogen or an acyl radical, and R.sup.1 is an --OR.sup.2 group or an ##STR2## group where R.sup.2 is a hydrogen atom or a hydrocarbon radical, and R.sup.3 is a hydrogen atom or a hydroxyl group, and the corresponding pharmaceutically acceptable salts of acid or basic addition, possess immunomodulating activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	93:46534 USPATFULL			
TITLE:	Retro-inverso analogues of thymopentin and the method for their synthesis			
INVENTOR(S):	Mariotti, Sabina, Fara Sabina, Italy Sisto, Alessandro, Rome, Italy Nencioni, Luciano, Poggibonsi, Italy Villa, Luigi, Florence, Italy Verdini, Antonio S., Monterotondo, Italy			
PATENT ASSIGNEE(S):	Sclavo S.p.A., Siena, Italy (non-U.S. corporation)			
	NUMBER	KIND	DATE	

PATENT INFORMATION:	US 5218089		19930608
APPLICATION INFO.:	US 1991-799421		19911126 (7)
RELATED APPLN. INFO.:	Division of Ser. No. US 1989-454282, filed on 21 Dec 1989, now patented, Pat. No. US 5091510		

	NUMBER	DATE
PRIORITY INFORMATION:	IT 1988-23099	19881223

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lee, Lester L.
ASSISTANT EXAMINER: Davenport, A. M.
LEGAL REPRESENTATIVE: Hedman, Gibson & Costigan
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
LINE COUNT: 906
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 4 OF 26 USPATFULL on STN
TI Renin inhibitors having all **retro-inverted peptide** bonds
AB Renin-inhibiting peptides of the formula ##STR1## in which X represents a group of the formula ##STR2## represents hydroxyl, alkoxy having up to 8 carbon atoms, benzyloxy or a group of the formula --NR.sup.4 R.sup.5,

A, B, D and E are identical or different and in each case

represent a direct bond,

represent a radical of the formula ##STR3## in which Q1 denotes oxygen, sulphur or the methylene group

represent a grouping of the formula ##STR4## m represents a number 0, 1 or 2, and L represents a group of the formula --CH.sub.2 NR.sup.2 R.sup.3

and physiologically acceptable salts thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 92:18951 USPATFULL
TITLE: Renin inhibitors having all **retro-inverted peptide** bonds
INVENTOR(S): Bender, Wolfgang, Wuppertal, Germany, Federal Republic of
Kinast, Gunther, Wuppertal, Germany, Federal Republic of
Knorr, Andreas, Erkrath, Germany, Federal Republic of
Stasch, Johannes-Peter, Wuppertal, Germany, Federal Republic of
PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Leverkusen, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5095006		19920310
APPLICATION INFO.:	US 1990-553493		19900713 (7)

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1989-3926021	19890508
	DE 1990-4004820	19900216

DOCUMENT TYPE: Utility

FILE SEGMENT: Granted
PRIMARY EXAMINER: Wax, Robert A.
ASSISTANT EXAMINER: Walsh, Stephen
LEGAL REPRESENTATIVE: Sprung Horn Kramer & Woods
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
LINE COUNT: 2702
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 5 OF 26 USPATFULL on STN
TI Retro-inverso analogues of thymopentin, and their use in the preparation of pharmaceutical compositions
AB New analogues of thymopentin (TP5) and of its tetrapeptide fragment (TP5.sup.1-4) containing two non-contiguous retro-inverted bonds in the peptide chain are described.

The new compounds, of general formula (I) ##STR1## where R is hydrogen or an acyl radical, and

R.sup.1 is an --OR.sup.2 group or an ##STR2## group where R.sup.2 is a hydrogen atom or a hydrocarbon radical, and R.sup.3 is a hydrogen atom or a hydroxyl group,

and the corresponding pharmaceutically acceptable salts of acid or basic addition, possess immunomodulating activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 92:15136 USPATFULL
TITLE: Retro-inverso analogues of thymopentin, and their use in the preparation of pharmaceutical compositions
INVENTOR(S): Mariotti, Sabina, Fara Sabina, Italy
Sisto, Alessandro, Rome, Italy
Nencioni, Luciano, Poggibonsi, Italy
Villa, Luigi, Florence, Italy
Verdini, Antonio S., Monterotondo, Italy
PATENT ASSIGNEE(S): Scalvo, S.p.A., Siena, Italy (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5091510		19920225	
APPLICATION INFO.:	US 1989-454282		19891221	(7)

	NUMBER	DATE
PRIORITY INFORMATION:	IT 1988-23099	19881223

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lee, Lester L.
ASSISTANT EXAMINER: Davenport, A.
LEGAL REPRESENTATIVE: Hedman, Gibson & Costigan
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
LINE COUNT: 786
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 6 OF 26 USPATFULL on STN
TI Retro-inverso C-terminal hexapeptide analogues of substance P
AB New retro-inverso peptides and peptide derivatives in the form of analogues of C-terminal hexapeptide fragments of Substance P, which are pharmacologically active, possess prolonged action with time, and are of general formula (I): ##STR1## they being useful as vasedilators.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 87:4926 USPATFULL

TITLE: Retro-inverso C-terminal hexapeptide analogues of substance P
INVENTOR(S): Verdini, Antonio S., Rome, Italy
Viscomi, Giuseppe C., Rome, Italy
PATENT ASSIGNEE(S): ENI-Ente Nazionale Idrocarburi, Rome, Italy (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4638046		19870120	
APPLICATION INFO.:	US 1985-689911		19850109	(6)

	NUMBER	DATE
PRIORITY INFORMATION:	IT 1984-19142	19840113

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Phillips, Delbert R.
LEGAL REPRESENTATIVE: Hedman, Gibson, Costigan & Hoare
NUMBER OF CLAIMS: 15
EXEMPLARY CLAIM: 1
LINE COUNT: 406
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 7 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03872 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is the full length HAX42 amino acid sequence.
ACCESSION NUMBER: AAB03872 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent

LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan021 (full length HAX42).

L1 ANSWER 8 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03871 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is the full length PAX2 amino acid sequence.
ACCESSION NUMBER: AAB03871 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N) ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan018 (full length PAX2).

L1 ANSWER 9 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03870 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance

active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is a fragment of HAX42.

ACCESSION NUMBER: AAB03870 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan091 (HAX42 fragment).

L1 ANSWER 10 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03869 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is a fragment of P31.

ACCESSION NUMBER: AAB03869 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119

PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan031 (P31 fragment).

L1 ANSWER 11 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03868 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is a fragment of PAX2.
ACCESSION NUMBER: AAB03868 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan129 (PAX2 fragment).

L1 ANSWER 12 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03867 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport

receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a retro-inversion used in the invention. The sequence is a HAX42 14 mer fragment D form retro-inversion peptide.

ACCESSION NUMBER: AAB03867 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan146 (HAX42 fragment).

L1 ANSWER 13 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03866 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a retro-inversion used in the invention. The sequence is a P31 16 mer fragment D form retro-inversion peptide.

ACCESSION NUMBER: AAB03866 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p

APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan145 (P31 fragment).

L1 ANSWER 14 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03865 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a retro-inversion used in the invention. The sequence is a PAX2 15 mer fragment D form retro-inversion peptide.
ACCESSION NUMBER: AAB03865 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N) ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan144 (PAX2 fragment).

L1 ANSWER 15 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Retro-inverted neurotrophic and analgesic peptides
AN AAW99841 peptide DGENE
AB The present invention describes retro-inverted (RI) peptides encompassing the active neurotrophic region of saposin C stimulating neurite outgrowth and prevent neural cell death, and also promoting increased myelination in neural cells. The retro-inverted peptides can be used for stimulating neuritogenesis or preventing cell death, for stimulating myelination or preventing demyelination, or for treating pain in mammals. The RI peptidase may be used in the treatment of Parkinson's disease, retinal neuropathy, multiple sclerosis, acute disseminated leukoencephalitis, trauma to the brain and/or spinal cord, progressive multifocal leukoencephalitis, metachromatic leukodystrophy, adrenal leukodystrophy and maldevelopment of the white matter in premature infants

(periventricular leucomalacia). The major advantage of retro inverted (RI) peptides is their enhanced activity in vivo due to improved resistance to proteolytic degradation. The present sequence represents a peptide from the present invention.

ACCESSION NUMBER: AAW99841 peptide DGENE
TITLE: Retro-inverted neurotrophic and analgesic peptides
INVENTOR: O'Brien J S; White M T; Wright D E
PATENT ASSIGNEE: (MYEL-N)MYELOS NEUROSCIENCES CORP.
PATENT INFO: WO 9912967 A1 19990318 37p
APPLICATION INFO: WO 1998-US18759 19980909
PRIORITY INFO: US 1998-148030 19980903
US 1997-926015 19970909
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 1999-229223 [19]
DESCRIPTION: Saposin C neurotrophic region **retro-inverted peptide** SEQ ID NO:5.

L1 ANSWER 16 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Retro-inverted neurotrophic and analgesic peptides
AN AAW99840 peptide DGENE
AB The present invention describes retro-inverted (RI) peptides encompassing the active neurotrophic region of saposin C stimulating neurite outgrowth and prevent neural cell death, and also promoting increased myelination in neural cells. The retro-inverted peptides can be used for stimulating neuritogenesis or preventing cell death, for stimulating myelination or preventing demyelination, or for treating pain in mammals. The RI peptidase may be used in the treatment of Parkinson's disease, retinal neuropathy, multiple sclerosis, acute disseminated leukoencephalitis, trauma to the brain and/or spinal cord, progressive multifocal leukoencephalitis, metachromatic leukodystrophy, adrenal leukodystrophy and maldevelopment of the white matter in premature infants (periventricular leucomalacia). The major advantage of retro inverted (RI) peptides is their enhanced activity in vivo due to improved resistance to proteolytic degradation. The present sequence represents a peptide from the present invention.

ACCESSION NUMBER: AAW99840 peptide DGENE
TITLE: Retro-inverted neurotrophic and analgesic peptides
INVENTOR: O'Brien J S; White M T; Wright D E
PATENT ASSIGNEE: (MYEL-N)MYELOS NEUROSCIENCES CORP.
PATENT INFO: WO 9912967 A1 19990318 37p
APPLICATION INFO: WO 1998-US18759 19980909
PRIORITY INFO: US 1998-148030 19980903
US 1997-926015 19970909
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 1999-229223 [19]
DESCRIPTION: Saposin C neurotrophic region **retro-inverted peptide** SEQ ID NO:12.

L1 ANSWER 17 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Retro-inverted neurotrophic and analgesic peptides
AN AAW99846 peptide DGENE
AB The present invention describes retro-inverted (RI) peptides encompassing the active neurotrophic region of saposin C stimulating neurite outgrowth and prevent neural cell death, and also promoting increased myelination in neural cells. The retro-inverted peptides can be used for stimulating neuritogenesis or preventing cell death, for stimulating myelination or preventing demyelination, or for treating pain in mammals. The RI peptidase may be used in the treatment of Parkinson's disease, retinal neuropathy, multiple sclerosis, acute disseminated leukoencephalitis, trauma to the brain and/or spinal cord, progressive multifocal leukoencephalitis, metachromatic leukodystrophy, adrenal leukodystrophy and maldevelopment of the white matter in premature infants

(periventricular leucomalacia). The major advantage of retro inverted (RI) peptides is their enhanced activity in vivo due to improved resistance to proteolytic degradation. The present sequence represents a peptide from the present invention.

ACCESSION NUMBER: AAW99846 peptide DGENE
TITLE: Retro-inverted neurotrophic and analgesic peptides
INVENTOR: O'Brien J S; White M T; Wright D E
PATENT ASSIGNEE: (MYEL-N)MYELOS NEUROSCIENCES CORP.
PATENT INFO: WO 9912967 A1 19990318 37p
APPLICATION INFO: WO 1998-US18759 19980909
PRIORITY INFO: US 1998-148030 19980903
US 1997-926015 19970909
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 1999-229223 [19]
DESCRIPTION: Saposin C neurotrophic region **retro-inverted peptide** SEQ ID NO:6.

L1 ANSWER 18 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Retro-inverted neurotrophic and analgesic peptides
AN AAW99845 peptide DGENE
AB The present invention describes retro-inverted (RI) peptides encompassing the active neurotrophic region of saposin C stimulating neurite outgrowth and prevent neural cell death, and also promoting increased myelination in neural cells. The retro-inverted peptides can be used for stimulating neuritogenesis or preventing cell death, for stimulating myelination or preventing demyelination, or for treating pain in mammals. The RI peptidase may be used in the treatment of Parkinson's disease, retinal neuropathy, multiple sclerosis, acute disseminated leukoencephalitis, trauma to the brain and/or spinal cord, progressive multifocal leukoencephalitis, metachromatic leukodystrophy, adrenal leukodystrophy and maldevelopment of the white matter in premature infants (periventricular leucomalacia). The major advantage of retro inverted (RI) peptides is their enhanced activity in vivo due to improved resistance to proteolytic degradation. The present sequence represents a peptide from the present invention.

ACCESSION NUMBER: AAW99845 peptide DGENE
TITLE: Retro-inverted neurotrophic and analgesic peptides
INVENTOR: O'Brien J S; White M T; Wright D E
PATENT ASSIGNEE: (MYEL-N)MYELOS NEUROSCIENCES CORP.
PATENT INFO: WO 9912967 A1 19990318 37p
APPLICATION INFO: WO 1998-US18759 19980909
PRIORITY INFO: US 1998-148030 19980903
US 1997-926015 19970909
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 1999-229223 [19]
DESCRIPTION: Saposin C neurotrophic region **retro-inverted peptide** SEQ ID NO:4.

L1 ANSWER 19 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Retro-inverted neurotrophic and analgesic peptides
AN AAW99844 peptide DGENE
AB The present invention describes retro-inverted (RI) peptides encompassing the active neurotrophic region of saposin C stimulating neurite outgrowth and prevent neural cell death, and also promoting increased myelination in neural cells. The retro-inverted peptides can be used for stimulating neuritogenesis or preventing cell death, for stimulating myelination or preventing demyelination, or for treating pain in mammals. The RI peptidase may be used in the treatment of Parkinson's disease, retinal neuropathy, multiple sclerosis, acute disseminated leukoencephalitis, trauma to the brain and/or spinal cord, progressive multifocal leukoencephalitis, metachromatic leukodystrophy, adrenal leukodystrophy and maldevelopment of the white matter in premature infants

(periventricular leucomalacia). The major advantage of retro inverted (RI) peptides is their enhanced activity in vivo due to improved resistance to proteolytic degradation. The present sequence represents a peptide from the present invention.

ACCESSION NUMBER: AAW99844 peptide DGENE
TITLE: Retro-inverted neurotrophic and analgesic peptides
INVENTOR: O'Brien J S; White M T; Wright D E
PATENT ASSIGNEE: (MYEL-N)MYELOS NEUROSCIENCES CORP.
PATENT INFO: WO 9912967 A1 19990318 37p
APPLICATION INFO: WO 1998-US18759 19980909
PRIORITY INFO: US 1998-148030 19980903
US 1997-926015 19970909
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 1999-229223 [19]
DESCRIPTION: Saposin C neurotrophic region **retro-inverted peptide** SEQ ID NO:11.

L1 ANSWER 20 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Retro-inverted neurotrophic and analgesic peptides
AN AAW99843 peptide DGENE
AB The present invention describes retro-inverted (RI) peptides encompassing the active neurotrophic region of saposin C stimulating neurite outgrowth and prevent neural cell death, and also promoting increased myelination in neural cells. The retro-inverted peptides can be used for stimulating neuritogenesis or preventing cell death, for stimulating myelination or preventing demyelination, or for treating pain in mammals. The RI peptidase may be used in the treatment of Parkinson's disease, retinal neuropathy, multiple sclerosis, acute disseminated leukoencephalitis, trauma to the brain and/or spinal cord, progressive multifocal leukoencephalitis, metachromatic leukodystrophy, adrenal leukodystrophy and maldevelopment of the white matter in premature infants (periventricular leucomalacia). The major advantage of retro inverted (RI) peptides is their enhanced activity in vivo due to improved resistance to proteolytic degradation. The present sequence represents a peptide from the present invention.

ACCESSION NUMBER: AAW99843 peptide DGENE
TITLE: Retro-inverted neurotrophic and analgesic peptides
INVENTOR: O'Brien J S; White M T; Wright D E
PATENT ASSIGNEE: (MYEL-N)MYELOS NEUROSCIENCES CORP.
PATENT INFO: WO 9912967 A1 19990318 37p
APPLICATION INFO: WO 1998-US18759 19980909
PRIORITY INFO: US 1998-148030 19980903
US 1997-926015 19970909
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 1999-229223 [19]
DESCRIPTION: Saposin C neurotrophic region **retro-inverted peptide** SEQ ID NO:8.

L1 ANSWER 21 OF 26 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Retro-inverted neurotrophic and analgesic peptides
AN AAW99842 peptide DGENE
AB The present invention describes retro-inverted (RI) peptides encompassing the active neurotrophic region of saposin C stimulating neurite outgrowth and prevent neural cell death, and also promoting increased myelination in neural cells. The retro-inverted peptides can be used for stimulating neuritogenesis or preventing cell death, for stimulating myelination or preventing demyelination, or for treating pain in mammals. The RI peptidase may be used in the treatment of Parkinson's disease, retinal neuropathy, multiple sclerosis, acute disseminated leukoencephalitis, trauma to the brain and/or spinal cord, progressive multifocal leukoencephalitis, metachromatic leukodystrophy, adrenal leukodystrophy and maldevelopment of the white matter in premature infants

(periventricular leucomalacia). The major advantage of retro inverted (RI) peptides is their enhanced activity in vivo due to improved resistance to proteolytic degradation. The present sequence represents a peptide from the present invention.

ACCESSION NUMBER: AAW99842 peptide DGENE
TITLE: Retro-inverted neurotrophic and analgesic peptides
INVENTOR: O'Brien J S; White M T; Wright D E
PATENT ASSIGNEE: (MYEL-N)MYELOS NEUROSCIENCES CORP.
PATENT INFO: WO 9912967 A1 19990318 37p
APPLICATION INFO: WO 1998-US18759 19980909
PRIORITY INFO: US 1998-148030 19980903
US 1997-926015 19970909
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 1999-229223 [19]
DESCRIPTION: Saposin C neurotrophic region **retro-inverted peptide** SEQ ID NO:7.

L1 ANSWER 22 OF 26 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
TI New Peyer's patch or M-cell targeting ligand, for facilitating the transport of e.g. drugs (such as, analgesics, insulin, antisense oligonucleotides or chemotherapy agents) or carriers through the human intestinal epithelium.
AN 2003-278270 [27] WPIDS
CR 2003-229409 [22]
AB WO2003004517 A UPAB: 20040813
NOVELTY - A purified synthetic polypeptide ligand comprising:
(i) a 12-mer L-peptide of 1 of 37 sequences;
(ii) a 12-mer D-peptide or **retro-inverted peptide** of (i);
(iii) an L-peptide (no more than 200 amino acids), of 1 of 23 sequences, not given in the specification;
(iv) a D-peptide or a **retro-inverted peptide** form of (iii); or
(v) a L-peptide motif, its D-peptide version, or retro-inverted version, is new.
DETAILED DESCRIPTION - A new purified synthetic polypeptide ligands comprises:
(i) a 12-mer L-peptide of 1 of 37 sequences of 12mLP1 - 12mLP42;
(ii) a 12-mer D-peptide, in which the D-peptide is the D-form of the 12-mer L-peptide;
(iii) a 12-mer **retro-inverted peptide**, which is the retro-inverted form of the 12-mer L-peptide;
(iv) a fragment of any of (i) - (iii), which is 5 contiguous amino acids;
(v) a homolog of one of (i) - (iii), which is 9/12 homologous to any of the 12-mer peptide;
(vi) a L-peptide motif, or its D-peptide version or retro-inverted version, where the L-peptide motif consists of one of (A) - (G);
(vii) an L-peptide of not more than 200 amino acids in length, preferably 6 - 12 amino acids in length, where the L-peptide comprises any of 23 amino acid sequences, not defined in the specification;
(viii) a D-peptide of not more than 200 amino acids in length, preferably 6 - 12 amino acids in length, which is the D-form of the L-peptide of (vii);
(ix) a **retro-inverted peptide** of not more than 200 amino acids, preferably 6 - 12 amino acids, in length, which is the retro-inverted form of the L-peptide of (vii);
(x) a fragment of any of (vii) - (ix), which is 5 contiguous amino acids; or
(xi) a homolog of any of (vii) - (ix), where the homologue is 83 % homologous to the L-peptide.
The 12-mer L-peptide, the 12-mer D-peptide, the 12-mer **retro-inverted peptide**, their fragments or homologs, or the

L-peptide motif of (vi) or its D-peptide version or retro-inverted version, when integrated as an N-terminal PIII fusion peptide of an M13 phage confers an ability to bind the phage to either Caco-2 cell, IEC-6 cell, rat, mouse, pig or dog homogenate membrane fractions. The ability is as great as that conferred by a similarly integrated 12-mer peptide not defined in the specification.

INDEPENDENT CLAIMS are also included for the following:

(1) purified nucleic acid sequences encoding the purified synthetic polypeptide ligands; and

(2) administering a pharmaceutical agent to an organism having intestinal epithelium by contacting the intestinal epithelium with the purified synthetic polypeptide ligand, where the ligand is covalently or non-covalently bound to a carrier entity.

Ala-Thr-Pro-Pro-Pro-Trp-Leu-Leu-Arg-Thr-Ala-Pro (12mLP1)
Asp-Gly-Ser-Ile-His-Lys-Arg-Asn-Ile-Met-Pro-Leu (12mLP2)
Asp-Tyr-Asp-Ser-Leu-Ser-Trp-Arg-Ser-Thr-Leu-His (12mLP3)
Gly-Glu-Pro-Thr-Thr-Asp-Met-Arg-Trp-Arg-Asn-Pro (12mLP4)
Gly-Leu-Trp-Pro-Trp-Asn-Pro-Val-Thr-Val-Leu-Pro (12mLP5)
His-Met-Leu-Asn-Asp-Pro-Thr-Pro-Pro-Pro-Tyr-Trp (12mLP6)
Lys-Pro-Ala-Tyr-Thr-His-Glu-Tyr-Arg-Trp-Leu-Ala (12mLP7)
Leu-Glu-Thr-Thr-Cys-Ala-Ser-Leu-Cys-Tyr-Pro-Ser (12mLP8)
Leu-Gly-Thr-Asp-Trp-His-Ser-Val-Ser-Tyr-Thr-Leu (12mLP9)
Leu-Gly-Thr-Leu-Asn-Ala-Gly-Val-Pro-Gly-Phe-Pro (12mLP10)
Leu-Thr-His-Ser-Lys-Asn-Pro-Val-Phe-Leu-Ser-Thr (12mLP11)
Leu-Val-Pro-Thr-Thr-His-Arg-His-Trp-Pro-Val-Thr (12mLP12)
Leu-Val-Ser-Asn-Arg-Gly-Phe-Asn-Asn-Leu-Ser (12mLP13)
Asn-Thr-Arg-Ile-Pro-Glu-Pro-Ile-Arg-Phe-Tyr-Met (12mLP14)
Asn-Val-Tyr-Thr-Phe-His-Ser-Met-Ser-Pro-Met-Pro (12mLP15)
Gln-His-Thr-Thr-Leu-Thr-Ser-His-Pro-Arg-Gln-Tyr (12mLP16)
Ser-Asp-Phe-Ser-Asp-Thr-Met-Pro-His-Arg-Pro-Ser (12mLP17)
Ser-Ile-Asp-Thr-Ile-Gln-Ile-Leu-Ser-Leu-Arg-Ser (12mLP18)
Ser-Ile-Ser-Trp-Ala-Ser-Gln-Pro-Pro-Tyr-Ser-Leu (12mLP19)
Ser-Met-Val-Lys-Phe-Pro-Arg-Pro-Leu-Asp-Ser-Arg (12mLP20)
Leu-Arg-Arg-Trp-Val-Arg-Val-Trp-Leu-Arg-Leu (12mLP21)
Thr-Met-Ser-Pro-Asn-Val-Tyr-Tyr-Thr-Ala-Phe-Gly (12mLP22)
Thr-Gln-Ile-Pro-Ser-Arg-Pro-Gln-Thr-Pro-Ser-Gln (12mLP23)
Val-Cys-Ser-Asn-Met-Tyr-Phe-Ser-Cys-Arg-Leu-Ser (12mLP24)
Val-Pro-Pro-His-Pro-Met-Thr-Tyr-Ser-Cys-Gln-Tyr (12mLP25)
Val-Pro-Arg-Leu-Glu-Ala-Thr-Met-Val-Pro-Asp-Ile (12mLP26)
Val-Pro-Thr-Lys-Pro-Glu-Leu-Pro-Val-Asn-Phe-Thr (12mLP27)
Trp-Ser-Ser-Asp-Leu-Pro-Gln-Pro-Ala-Ser-Thr-Tyr (12mLP28)
Tyr-Ile-Thr-Pro-Tyr-Ala-His-Leu-Arg-Gly-Gly-Asn (12mLP29)
Asn-Val-Tyr-Thr-Asp-Asn-Thr-Leu-Ser-Pro-Thr-Pro (12mLP30)
Leu-Glu-Thr-Thr-Ala-Ala-Ser-Leu-Cys-Tyr-Ser (12mLP31)
Leu-Glu-Thr-Thr-Cys-Ala-Ser-Leu-Ala-Tyr-Pro-Ser (12mLP32)
Leu-Glu-Thr-Thr-Ala-Ala-Ser-Leu-Ala-Tyr-Pro-Ser (12mLP33)
Leu-Glu-Thr-Thr-Ser-Ala-Ser-Leu-Ser-Tyr-Pro-Ser (12mLP34)
Val-Pro-Pro-His-Pro-Met-Thr-Tyr-Ser-Ala-Gln-Tyr (12mLP38)
Val-Pro-Pro-His-Pro-Met-Thr-Tyr-Ser-Ser-Gln-Tyr (12mLP39)
Val-Ser-Ser-Asn-Met-Tyr-Phe-Ser-Ser-Arg-Leu-Ser (12mLP42)
Thr-Pro-Pro-Pro (A)
Pro-Pro-Tyr (B)
Pro-Val-Thr (C)
Leu-Gly-Thr (D)
Asn-Val-Tyr (E)
His-Glu-Ser-Ser-His (F)
Asn-Val-Tyr-Thr-Xaa-Xaa-Xaa-Xaa-Ser-Pro-Xaa-Pro (G)

ACTIVITY - Analgesic; Anticoagulant; Sedative.

MECHANISM OF ACTION - Vaccine; Gene therapy. No suitable biological data is given.

USE - The polypeptide ligands are useful for targeting pharmaceutical agents (e.g. vaccine (claimed), genes, drugs, antigens or recombinant viruses) and carriers to the intestinal epithelial tissue of an organism. The polypeptide ligand may be used or administered to a mammal,

particularly a human (claimed). The ligands are useful for facilitating the transport of drugs (e.g. analgesics, anti-coagulants, sedatives, insulin, narcotic antagonists, antisense oligonucleotides or chemotherapy agents), macromolecules or particles (e.g. biodegradable nanoparticles or microparticles), bacterial carriers or viral carriers through the human intestinal epithelium, M-cells located in gut associated lymphoid tissue, and/or Peyer's Patch tissue of the intestinal epithelium.

Dwg.0/19

ACCESSION NUMBER: 2003-278270 [27] WPIDS
CROSS REFERENCE: 2003-229409 [22]
DOC. NO. CPI: C2003-072620
TITLE: New Peyer's patch or M-cell targeting ligand, for facilitating the transport of e.g. drugs (such as, analgesics, insulin, antisense oligonucleotides or chemotherapy agents) or carriers through the human intestinal epithelium.
DERWENT CLASS: B04 D16
INVENTOR(S): HIGGINS, L; LAMBKIN, I; O'MAHONY, D; LANBKIN, I
PATENT ASSIGNEE(S): (HIGG-I) HIGGINS L; (LAMB-I) LAMBKIN I; (OMAH-I) O'MAHONY D; (ELAN-N) ELAN CORP PLC
COUNTRY COUNT: 101
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2003004517	A2	20030116	(200327)*	EN	91
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW					
US 2003096354	A1	20030522	(200336)		
EP 1432729	A2	20040630	(200443)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
AU 2002326070	A1	20030121	(200452)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003004517	A2	WO 2002-IB3401	20020628
US 2003096354	A1 Provisional	US 2001-302591P	20010702
		US 2002-185815	20020628
EP 1432729	A2	EP 2002-760458	20020628
		WO 2002-IB3401	20020628
AU 2002326070	A1	AU 2002-326070	20020628

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1432729	A2 Based on	WO 2003004517
AU 2002326070	A1 Based on	WO 2003004517

PRIORITY APPLN. INFO: US 2001-302591P 20010702; US 2002-185815 20020628

L1 ANSWER 23 OF 26 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, hemophilia, anemia, cancer, migraines and angina pectoris.

AN 2000-400037 [34] WPIDS
AB WO 200031123 A UPAB: 20000718
NOVELTY - A **retro-inverted peptide** (I) or a derivative of it, which specifically binds to the gastro-intestinal tract receptor HPT1, hPEPT1, D2H or hSI, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a **retro-inverted peptide** (II) which enhances delivery of an active agent across the gastro-intestinal tract into the systemic, portal or hepatic circulation;

(2) a composition, comprising (I) or (II), bound to a material comprising an active agent used to treat a mammalian disease or disorder;

(3) a composition, comprising a chimeric protein bound to a material comprising an active agent used to treat a mammalian disease or disorder, the protein comprises ZElan 144, ZElan 145 or ZElan 146, or a binding portion of them fused via a covalent bond to a second protein;

(4) a composition, comprising (I) or (II) bound to a drug containing particle;

(5) a pharmaceutical composition, comprising the composition of (2) in a carrier for use in vivo in humans;

(6) an antibody, or a fragment of it, capable of immunospecifically binding (I) or (II);

(7) a composition comprising (I) or (II) coated onto, absorbed onto or covalently bonded to, the surface of a nano- or microparticle; and

(8) a nano- or microparticle formed from (I) or (II).

ACTIVITY - Hypotensive; antidiabetic; osteopathic; hemostatic; antianemic; cytostatic; antimigraine; antianginal.

MECHANISM OF ACTION - The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation.

USE - The gastrointestinal agents are used to facilitate transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation (claimed). The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, hemophilia, anemia, cancer, migraine, and angina pectoris (claimed). The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The antibodies can be used for imaging peptides after in vivo administration, to monitor treatment efficacy, to measure peptide levels in physiological samples, and in diagnostic methods.

ADVANTAGE - None given.

Dwg.0/2

ACCESSION NUMBER: 2000-400037 [34] WPIDS
DOC. NO. CPI: C2000-120829
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, hemophilia, anemia, cancer, migraines and angina pectoris.
DERWENT CLASS: B04
INVENTOR(S): O'MAHONY, D J
PATENT ASSIGNEE(S): (ELAN-N) ELAN CORP PLC
COUNTRY COUNT: 91
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000031123	A2	20000602	(200034)*	EN	36

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES

FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL
TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000011744 A 20000613 (200043)
EP 1131344 A2 20010912 (200155) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI
JP 2002530429 W 20020917 (200276) 39

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000031123	A2	WO 1999-IE117	19991119
AU 2000011744	A	AU 2000-11744	19991119
EP 1131344	A2	EP 1999-972640	19991119
		WO 1999-IE117	19991119
JP 2002530429	W	WO 1999-IE117	19991119
		JP 2000-583950	19991119

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000011744	A	Based on	WO 2000031123
EP 1131344	A2	Based on	WO 2000031123
JP 2002530429	W	Based on	WO 2000031123

PRIORITY APPLN. INFO: US 1998-109038P 19981119

L1 ANSWER 24 OF 26 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
TI Retro-inverted tri peptide cpds. - useful as hypotensive tranquillising and analgesic agents.
AN 1986-286129 [44] WPIDS
AB EP 199379 A UPAB: 19930922
Tripeptides with at least a **retro-inverted peptide** bond, pharmaceutically acceptable basic salts, esters or alkyl amides, of formula (I) are new (where Q1 and Q2 = -CONH- or -NHCO-, at least 1 being -NHCO-; R1 is H, 1-7C alkyl, aryl, hydroxyalkyl, hydroxyaralkyl, guanidylalkyl, aminoalkyl, alkoxyalkyl, acylaminoalkyl, imidazolylalkyl, indolylalkyl, mercaptoalkyl, alkylmercaptoalkyl, carbamoylalkyl, carboxyalkyl, alkylcarbamoylalkyl or alkoxycarbonylalkyl; R2 is p-hydroxybenzyl, benzyl or a gp. of formula (II); Z is OH, OR3, NH2 or NHR3; and R3 is 1-10C alkyl).
USE/ADVANTAGE - (I) are retro-inverse analogues of Glp-Leu-Trp-OH with hypotensive, tranquilliser and analgesic activities and with reduced tendency to inactivation by circulating peptidase enzymes. Hypotensive doses are e.g. 0.1-400, pref. 2-300 mg/kg/day, pref. in 2-4 units. Admin. may be p.o. or parenterally.
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ABEQ EP 199379 B UPAB: 19930922
Tripeptide with at least a retro-inverted peptidic bond, its pharmaceutically acceptable basic salts, esters or alkyl amides, definable by means of the following general formulae; Ia,Ib,Ic; R1 represents a hydrogen atom, an alkyl group with a maximummm of 7 carbon atoms, an aryl, hydroxyalkyl or hydroxyarylalkyl, guanidylalkyl, amino-alkyl, alkyloxy-alkyl, acylamino-alkyl, imidazolyalkyl, indolyl-alkyl, mercapto-alkyl, alkylmercaptoalkyl, carbamoylalkyl, carboxyalkyl, alkyl-carbamoylalkyl or alky-loxy-carbonylalkyl group; R2 represents a gp. (i), (ii) or (iii) group; Z represents an OH, OR3, NH2, NHR3 group, wherein R3 represents an alkyl group with a number of carbon atoms comprised within the range of from 1 to 10.
ABEQ US 4748155 A UPAB: 19930922
Tripeptides of formulae (I), (II) and (III) are claimed, where R1 is

-CH2-CH(CH3)2, -CH(CH3)2 or -CH(CH3)CH2CH3; R2 is (p-hydroxy)benzyl or a gp. of formula (IV), and Z is OH, OR3 NH2, or NHR3, where R3 is 1-10C alkyl.

USE/ADVANTAGE - (I) is used to treat hypertension, anxiety and pain. They are less labile than prior tripeptides used for this purpose.

ACCESSION NUMBER: 1986-286129 [44] WPIDS
DOC. NO. CPI: C1986-123788
TITLE: Retro-inverted tri peptide cpds. - useful as hypotensive tranquillising and analgesic agents.
DERWENT CLASS: B05
INVENTOR(S): DELUCA, G; DISTAZIO, G; POLITI, V; SISTO, A; VERDINI, A S; VIRDIA, A
PATENT ASSIGNEE(S): (ENIE) ENIRICERCHE SPA; (POLI-N) POLIFARMA SPA
COUNTRY COUNT: 7
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 199379	A	19861029	(198644)*	EN	18
R: DE FR GB					
JP 61233665	A	19861017	(198648)		
US 4748155	A	19880531	(198824)		
EP 199379	B	19901003	(199040)		
R: DE FR GB					
IT 1184164	B	19871022	(199041)		
DE 3674623	G	19901108	(199046)		
JP 06088968	B2	19941109	(199443)		13

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 199379	A	EP 1986-200345	19860307
JP 61233665	A	JP 1986-59653	19860319
US 4748155	A	US 1986-838120	19860310
JP 06088968	B2	JP 1986-59653	19860319

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 06088968	B2 Based on	JP 61233665

PRIORITY APPLN. INFO: IT 1985-19961 19850319

L1 ANSWER 25 OF 26 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
TI New retro-inverted analogues of bradykinin potentiator penta peptide - useful as prolonged action antihypertensives and diagnostic agents.
AN 1986-198158 [31] WPIDS
AB EP 185433 A UPAB: 19930922
Retro-inverted peptides of formula (I) useful as anti-hypertensives and diagnostics are new. R2, R3 = D-amino acid residues; R1 = side-chain of an amino acid residue present in a natural peptide or its analogue; A = H, 1-7C alkyl, aryl, aralkyl or hydroxyalkyl; B = H, 1-7C alkyl, aryl, aralkyl, or OH-, guanidyl-, amino-, alkoxy-, acylamino-, imidazolyl-, indolyl-, SH-, alkylthio-, CONH2-, COOH-, alkylcarbamoyl or alkoxycarbonyl-alkyl; or A+B = (CH2)m, in which one of the C atoms is directly bonded to PhCH2O or PhS; m = 3 or 4; Z = OH, alkoxy or NH2.

(I) in which R1 = Me, R2 = D-Phe, R3 = D-Lys and NA-CHB-COZ = Pro(4-allo-S-Ph)-OH, in (S)- or (R)-forms, is specifically claimed.

USE/ADVANTAGE - (I) are analogues of bradykinin potentiator pentapeptide and they inhibit angiotensin-converting enzyme and have more prolonged activity in vivo. They are therefore useful as antihypertensives and diagnostic agents.

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ABEQ US 4713367 A UPAB: 19930922

Partially retroinverso peptides of formula (I), analogues of bradykinin potentiating peptide (BPPalpha), and salts are new. In (I), R1 and R2 are each the side chain of one of corresp natural peptides; X is -X-Ph or O-CH2-PH; Z is OH, alkoxy, NH2. Pref cpds are Glp-Lys-gPhe-mAla Pro (4-allo-S-Ph)-OH and Glp-Lys-gPhe-m(S) Ala-Pro (4-allo-S-Ph)-OH. (I) may be prepd e.g. by condensing N-mono-acetylated gem diamine cpd (II) with peptide (III).

USE - (I) are more stable angiotensin-converting enzyme inhibitors than natural ACE inhibitor and are used as antihypertensives at dosage e.g. 1-1000(2.5-100) mg/day.

ABEQ US 4728725 A UPAB: 19930922

Retro-inverted peptide analogues of Bradykinin Potentiator Pentapeptide (BPP5a) of formula (I) are new.

In (I), R3 is D-Lys; R2 is D-Phe; R1 is natural peptide amino acid side chain; A and B together are (CH2)m residue forming ring with bonded N or C atoms and with one C of (CH2)m-bridge directly bonded to O-Bz or S-Ph; m is 3 or 4; and Z is OH, alkylOH or NH2.

Esp. cpds. are (Ia) and (Ib). (I) may be prepd. e.g. by liq. phase condensation of (II) with (III) using condensation agents.

USE - (I) are mixed inhibitors of ACE, recognising both C and N terminals, the retro-inversion giving increased stability against peptidases, and are used as highly active antihypertensives and diagnostics.

ACCESSION NUMBER: 1986-198158 [31] WPIDS
DOC. NO. CPI: C1986-085243
TITLE: New retro-inverted analogues of bradykinin potentiator penta peptide - useful as prolonged action antihypertensives and diagnostic agents.
DERWENT CLASS: B03 P24
INVENTOR(S): SISTO, A; VERDINI, A S; VIRDIA, A
PATENT ASSIGNEE(S): (ENIE) ENICHEM SPA; (ENIR-N) ENIRECERCHE SPA; (VEDU-N) VERDUCCI G SRL; (VERD-N) VERDUCCI SRL G
COUNTRY COUNT: 13
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 185433	A	19860625	(198631)*	EN	8
R: AT BE CH DE FR GB IT LI LU NL SE					
FR 2575048	A	19860627	(198632)		
JP 61155395	A	19860715	(198634)		
JP 62501610	W	19870702	(198732)		
US 4713367	A	19871215	(198806)		
US 4728725	A	19880301	(198812)		
IT 1178789	B	19870916	(199035)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 185433	A	EP 1985-202099	19851218
JP 61155395	A	JP 1985-289135	19851221
US 4713367	A	US 1986-821449	19860122
US 4728725	A	US 1985-811487	19851220

PRIORITY APPLN. INFO: IT 1984-24200 19841221

L1 ANSWER 26 OF 26 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
TI Totally solid phase synthesis of peptide(s) - containing **retro-inverted peptide** bond, using crosslinked sarcosinyl copolymer as support.

AN 1984-012770 [03] WPIDS

AB EP 97994 A UPAB: 19930925

The support comprises polydimethylacrylamide -co-acryloylsarcosine methyl ester crosslinked with N,N'-ethylene bis-acrylamide. The polypeptide (I) chain is constructed, starting from the C terminus, by condensation with amino acid and/or peptide derivs. and cpds. of formula (II) (Z and Z' are side chains present in naturally-occurring amino acids).

The cpd. I, I-bis(trifluoroacetyl) iodobenzene (III) is then used to convert terminal prim. carboxyamide gps. to amino, and finally the entire peptide is released from the resin simultaneous with removal of amine and side chain protecting gp.

Especially the method is used to make cpd. PyroGlu-Phe-gPhe-mGly -Leu-Met-NH2 (Ia) (gPhe is gem-diaminophenylalanyl; mGly is malonyl).

Since (III) converts amido gps. on the resin, the synthesis can be done entirely in the solid phase. The method is simple and rapid; suitable for automation and avoids the losses associated with usual isolation and purification stages. (I) have biological activity equal or better than tht of their natural analogues and will improved resistance to enzymatic hydrolysis.

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ABEQ EP 97994 B UPAB: 19930925

The support comprises polydimethylacrylamide -co-acryloylsarcosine methyl ester crosslinked with N,N'-ethylene bis-acrylamide. The polypeptide (I) chain is constructed, starting from the C terminus, by condensation with amino acid and/or peptide derivs. and cpds. of formula (II) (Z and Z' are side chains present in naturally-occurring amino acids).

The cpd. I, I-bis(trifluoroacetyl) iodobenzene (III) is then used to convert terminal prim. carboxyamide gps. to amino, and finally the entire peptide is released from the resin simultaneous with removal of amine and side chain protecting gp.

Esp. the method is used to make cpd. PyroGlu-Phe-gPhe-mGly -Leu-Met-NH2 (Ia) (gPhe is gem-diaminophenylalanyl; mGly is malonyl).

Since (III) converts amido gps. on the resin, the synthesis can be done entirely in the solid phase. The method is simple and rapid; suitable for automation and avoids the losses associated with usual isolation and purification stages. (I) have biological activity equal or better than tht of their natural analogues and will improved resistance to enzymatic hydrolysis.

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ACCESSION NUMBER: 1984-012770 [03] WPIDS

DOC. NO. CPI: C1984-005381

TITLE: Totally solid phase synthesis of peptide(s) - containing **retro-inverted peptide** bond, using crosslinked sarcosinyl copolymer as support.

DERWENT CLASS: A96 B04

INVENTOR(S): PESSI, A; PINORI, M; VERDINI, A S; VISCOMI, G C

PATENT ASSIGNEE(S): (ANIS) ANIC SPA; (ASRN) ASSORENI; (ENIE) ENICHEM SPA

COUNTRY COUNT: 11

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 97994	A	19840111	(198403)*	EN	29
R: AT BE CH DE FR GB LI LU NL SE					
EP 97994	B	19870930	(198739)	EN	
R: AT BE CH DE FR GB LI LU NL SE					
DE 3373908	G	19871105	(198745)		
IT 1190891	B	19880224	(199050)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 97994	A	EP 1983-200889	19830617

PRIORITY APPLN. INFO: IT 1982-22046 19820624

=> s l1 and gastro-intestinal tract receptor
L2 9 L1 AND GASTRO-INTESTINAL TRACT RECEPTOR

=> d l2 ti abs ibib tot

L2 ANSWER 1 OF 9 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver
active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03872 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the **gastro-intestinal tract receptor** HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is the full length HAX42 amino acid sequence.
ACCESSION NUMBER: AAB03872 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan021 (full length HAX42).

L2 ANSWER 2 OF 9 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver
active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03871 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the **gastro-intestinal tract receptor** HPT1, hPEPT1, D2H or hSI. Also included in the invention

are a **retro-inverted peptide** which enhances
the delivery of an active agent across the gastrointestinal tract (GIT)
into the systemic, portal or hepatic circulation. A composition
comprising a **retro-inverted peptide** bound
to a material comprising an active agent used to treat a mammalian
disease or disorder is also disclosed in the invention. The
retro-inversion peptides target gastrointestinal tract transport
receptors to promote in vivo uptake of active agents and/or enhance
active agent delivery across the tract into the systemic circulation. The
gastrointestinal agents (containing retro-inverted peptides) are used to
facilitate the transport of active ingredients through human or animal
gastrointestinal tissue, from the lumen to the portal, hepatic, or
systemic circulation. The compositions containing these agents can be
used to treat or prevent mammalian, especially human, diseases or
disorders, especially hypertension, diabetes, osteoporosis, haemophilia,
anaemia, cancer, migraine, and angina pectoris. The compositions can be
administered in vivo to image selected sites or tissues, such as the
gastrointestinal tract, by using an imaging agent as the active agent.
The present sequence represents a peptide from which a retro-inversion
peptide of the invention is created. The peptide is the full length PAX2
amino acid sequence.

ACCESSION NUMBER: AAB03871 peptide DGENE
TITLE: **Retro-inverted peptide** used to
deliver active agents across the gastrointestinal tract to
treat hypertension, diabetes, osteoporosis, haemophilia,
anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan018 (full length PAX2).

L2 ANSWER 3 OF 9 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver
active agents across the gastrointestinal tract to treat hypertension,
diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and
angina pectoris -
AN AAB03870 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind
to the **gastro-intestinal tract**
receptor HPT1, hPEPT1, D2H or hSI. Also included in the invention
are a **retro-inverted peptide** which enhances
the delivery of an active agent across the gastrointestinal tract (GIT)
into the systemic, portal or hepatic circulation. A composition
comprising a **retro-inverted peptide** bound
to a material comprising an active agent used to treat a mammalian
disease or disorder is also disclosed in the invention. The
retro-inversion peptides target gastrointestinal tract transport
receptors to promote in vivo uptake of active agents and/or enhance
active agent delivery across the tract into the systemic circulation. The
gastrointestinal agents (containing retro-inverted peptides) are used to
facilitate the transport of active ingredients through human or animal
gastrointestinal tissue, from the lumen to the portal, hepatic, or
systemic circulation. The compositions containing these agents can be
used to treat or prevent mammalian, especially human, diseases or
disorders, especially hypertension, diabetes, osteoporosis, haemophilia,
anaemia, cancer, migraine, and angina pectoris. The compositions can be
administered in vivo to image selected sites or tissues, such as the
gastrointestinal tract, by using an imaging agent as the active agent.
The present sequence represents a peptide from which a retro-inversion

peptide of the invention is created. The peptide is a fragment of HAX42.
ACCESSION NUMBER: AAB03870 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan091 (HAX42 fragment).

L2 ANSWER 4 OF 9 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03869 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the **gastro-intestinal tract receptor** HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is a fragment of P31.
ACCESSION NUMBER: AAB03869 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan031 (P31 fragment).

L2 ANSWER 5 OF 9 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and

angina pectoris -
AN AAB03868 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the **gastro-intestinal tract receptor** HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is a fragment of PAX2.
ACCESSION NUMBER: AAB03868 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan129 (PAX2 fragment).

L2 ANSWER 6 OF 9 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03867 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the **gastro-intestinal tract receptor** HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia,

anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a retro-inversion used in the invention. The sequence is a HAX42 14 mer fragment D form retro-inversion peptide.

ACCESSION NUMBER: AAB03867 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan146 (HAX42 fragment).

L2 ANSWER 7 OF 9 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03866 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the **gastro-intestinal tract receptor** HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a retro-inversion used in the invention. The sequence is a P31 16 mer fragment D form retro-inversion peptide.

ACCESSION NUMBER: AAB03866 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N)ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan145 (P31 fragment).

L2 ANSWER 8 OF 9 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
AN AAB03865 peptide DGENE
AB This invention relates to retro-inverted peptides which specifically bind to the **gastro-intestinal tract receptor** HPT1, hPEPT1, D2H or hSI. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a retro-inversion used in the invention. The sequence is a PAX2 15 mer fragment D form retro-inversion peptide.
ACCESSION NUMBER: AAB03865 peptide DGENE
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -
INVENTOR: O'Mahony D J
PATENT ASSIGNEE: (ELAN-N) ELAN CORP PLC.
PATENT INFO: WO 2000031123 A2 20000602 36p
APPLICATION INFO: WO 1999-IE117 19991119
PRIORITY INFO: US 1998-109038 19981119
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-400037 [34]
DESCRIPTION: GIT receptor targeting peptide ZElan144 (PAX2 fragment).

L2 ANSWER 9 OF 9 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, hemophilia, anemia, cancer, migraines and angina pectoris.
AN 2000-400037 [34] WPIDS
AB WO 200031123 A UPAB: 20000718
NOVELTY - A **retro-inverted peptide** (I) or a derivative of it, which specifically binds to the **gastro-intestinal tract receptor** HPT1, hPEPT1, D2H or hSI, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a **retro-inverted peptide** (II) which enhances delivery of an active agent across the gastro-intestinal tract into the systemic, portal or hepatic circulation;
(2) a composition, comprising (I) or (II), bound to a material comprising an active agent used to treat a mammalian disease or disorder;
(3) a composition, comprising a chimeric protein bound to a material comprising an active agent used to treat a mammalian disease or disorder;

the protein comprises ZElan 144, ZElan 145 or ZElan 146, or a binding portion of them fused via a covalent bond to a second protein;

(4) a composition, comprising (I) or (II) bound to a drug containing particle;

(5) a pharmaceutical composition, comprising the composition of (2) in a carrier for use in vivo in humans;

(6) an antibody, or a fragment of it, capable of immunospecifically binding (I) or (II);

(7) a composition comprising (I) or (II) coated onto, absorbed onto or covalently bonded to, the surface of a nano- or microparticle; and

(8) a nano- or microparticle formed from (I) or (II).

ACTIVITY - Hypotensive; antidiabetic; osteopathic; hemostatic; antianemic; cytostatic; antimigraine; antianginal.

MECHANISM OF ACTION - The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation.

USE - The gastrointestinal agents are used to facilitate transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation (claimed). The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, hemophilia, anemia, cancer, migraine, and angina pectoris (claimed). The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The antibodies can be used for imaging peptides after in vivo administration, to monitor treatment efficacy, to measure peptide levels in physiological samples, and in diagnostic methods.

ADVANTAGE - None given.

Dwg.0/2

ACCESSION NUMBER: 2000-400037 [34] WPIDS
DOC. NO. CPI: C2000-120829
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, hemophilia, anemia, cancer, migraines and angina pectoris.
DERWENT CLASS: B04
INVENTOR(S): O'MAHONY, D J
PATENT ASSIGNEE(S): (ELAN-N) ELAN CORP PLC
COUNTRY COUNT: 91
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000031123	A2	20000602	(200034)*	EN	36
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000011744	A	20000613	(200043)		
EP 1131344	A2	20010912	(200155)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 2002530429	W	20020917	(200276)		39

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000031123	A2	WO 1999-IE117	19991119

AU 2000011744	A	AU 2000-11744	19991119
EP 1131344	A2	EP 1999-972640	19991119
		WO 1999-IE117	19991119
JP 2002530429	W	WO 1999-IE117	19991119
		JP 2000-583950	19991119

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000011744	A	Based on	WO 2000031123
EP 1131344	A2	Based on	WO 2000031123
JP 2002530429	W	Based on	WO 2000031123

PRIORITY APPLN. INFO: US 1998-109038P 19981119